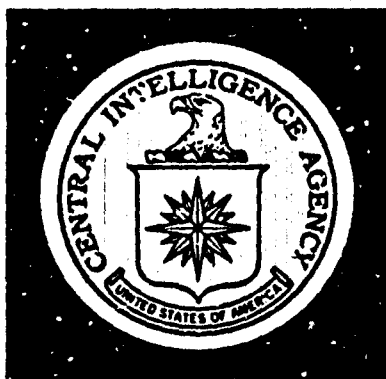


(b)(1)
(b)(3)

~~Top Secret~~



DIRECTORATE OF
SCIENCE & TECHNOLOGY

WEEKLY SURVEYOR

~~Top Secret~~

3 November 1969

~~TOP SECRET~~ [REDACTED]

Weekly Surveyor

[REDACTED]
3 November 1969

SPACE

Soviet Moon Probe to Carry French Laser Experiment: A French laser reflector is to be placed on the moon by a Soviet Luna probe during 1969. The apparatus consists of 14 silica-glass triangular prismatic reflectors shaped so as to give total reflection of incident light. The reflector apparatus was constructed in France under the direction of the Centre National d'Etudes Spatiales. The ground installation is at Pic du Midi Observatory and consists of a telescope in which the emitter -- a 100 MW ruby laser -- has been fitted. The same telescope will receive the reflected light pulses. [REDACTED]
[REDACTED]

Comment: Both Luna 15, which crashed into the moon at the time of the Apollo mission, and the Soviet Lunar probe which apparently failed on 22 October are thought to have carried French laser reflector packages. The megawatt power of the laser is not unusual. The French use of 14 reflectors compares with 100 reflectors employed in the successful US lunar laser experiment. The size of the individual French reflectors is not given. Pic du Midi might be able to use the US reflectors already on the moon, but they would have trouble locating it with their laser beam -- as did the US. The Soviet and French scientists also wish to conduct the complete experiment as a matter of national scientific prestige. Principal objective is to obtain a series of extremely accurate measurements of the distance from the earth to the moon. [REDACTED]
[REDACTED]

~~TOP SECRET~~ [REDACTED]
[REDACTED]
[REDACTED]